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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/720,744

11/25/2003

Hyung-Joo Kang

1793.1064

3111

21171 7590 07/24/2008

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SUITE 700

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WASHINGTON, DC 20005

EXAMINER

GUPTA, PARUL H

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

07/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/720,744	<b>Applicant(s)</b> KANG ET AL.	
	<b>Examiner</b> PARUL GUPTA	<b>Art Unit</b> 2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,4,7-9,11,12 and 15-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7-9,11,12 and 15-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. Claims 1-23 are pending for examination as interpreted by the examiner. The arguments and amendment filed on 4/11/08 were considered for this application.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 7, 9, 11, 15, and 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable Nagasato et al., US Patent 6,181,670 in view of Van Rosmalen et al., US Patent 6,130,418.

Regarding claim 1, Nagasato et al. teaches in figure 1 an optical pickup actuator, comprising: a blade (2) with an objective lens (1); a plurality of suspensions (122 and 124) coupled at one end to the blade and fixed at another end to a holder (6), provided at one side of a base (120), such that the suspensions movably support the blade; a focusing coil member and a tracking coil members (112 and 114) installed on the base, separated from each other. Nagasato et al. does not but Van Rosmalen et al. teaches in figure 3 a device wherein a single magnet member (45) is installed on the blade between the focusing coil member (39) and the tracking coil members (41) the focusing coil member, the tracking coil member and the single magnet member are installed on one side of the objective lens (17). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of installing all of the elements

on one side of the objective lens and a single magnet into the system of Nagasato et al. as taught by Van Rosmalen et al. The motivation would be to reduce the device in size and thickness to reduce cost and to have an efficient use of the magnetic driving forces (column 2, lines 57-63 of Van Rosmalen et al.).

Regarding claim 3, Nagasato et al. teaches in figure 1 the optical pickup actuator of claim 1, respectively, further comprising a pair of tilt driving coil members (column 8, lines 59-64).

Regarding claim 7, Nagasato et al. teaches in figure 1 the optical pickup actuator of claim 1, wherein the magnet member (116 and 118) is a surface polarization magnet (polarization shown on magnet).

Regarding claim 9, Nagasato et al. teaches an optical recording and/or reproducing apparatus (column 1, lines 7-17), comprising: an optical pickup having an actuator (shown in figure 1) for driving an objective lens (1), and movably installed in a radial direction of a recording medium (shown in figure 2), and records and/or reproduces information to/from the recording medium; and a controller controlling a focusing servo and a tracking servo of the optical pickup (explained to be conventional in column 1, line 66 to column 7, line 8), wherein the optical pickup actuator (shown in figure 1) includes: a blade (2) with an objective lens (1); a plurality of suspensions (122 and 124) coupled at one end to the blade and fixed at another end to a holder (6), provided at one side of a base (120), such that the suspensions movably support the blade; a focusing coil member and a tracking coil members (112 and 114) installed on the base, separated from each other. Nagasato et al. does not but Van Rosmalen et al.

teaches in figure 3 a device wherein a single magnet member (45) is installed on the blade between the focusing coil member (39) and the tracking coil members (41) the focusing coil member, the tracking coil member and the single magnet member are installed on one side of the objective lens (17). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of installing all of the elements on one side of the objective lens and a single magnet into the system of Nagasato et al. as taught by Van Rosmalen et al. The motivation would be to reduce the device in size and thickness to reduce cost and to have an efficient use of the magnetic driving forces (column 2, lines 57-63 of Van Rosmalen et al.).

Regarding claim 11, Nagasato et al. teaches the optical recording and/or reproducing apparatus of claim 9, further comprising a pair of tilt driving coil members (column 8, lines 59-64).

Regarding claim 15, Nagasato et al. teaches the optical recording and/or reproducing apparatus of claim 9, wherein the magnet member (116 and 118) is a surface polarization magnet (polarization shown on magnet).

Regarding claim 17, Nagasato et al. teaches an optical pickup actuating method, comprising: moving a blade, including a lens, in tracking and/or focusing directions; and driving a coil system including a focusing coil member and a tracking coil member, separated from the blade (shown in figure 1), such that an interaction with a single magnet (each coil interacts with either magnet 116 or 118, making each interact with only one magnet) on the blade by one of the focusing coil member and the tracking coil

member controls the moving of the blade in the tracking and/or focusing directions (column 9, lines 4-17).

Regarding claim 18, Nagasato et al. teaches the optical pickup method of claim 17, wherein the coil system includes the focusing coil member, mounted on a base separate from the movable blade (shown in figure 1), interacting with the magnet of the blade to control the moving of the blade in the focusing direction (column 9, lines 4-17).

Regarding claim 19, Nagasato et al. teaches the optical pickup method of claim 17, wherein the coil system includes the tracking coil member, mounted on a base separate from the movable blade (shown in figure 1), interacting with the magnet of the blade to control the moving of the blade in the tracking direction (column 9, lines 4-17).

Regarding claim 20, Nagasato et al. teaches the optical pickup method of claim 17, wherein the coil system includes the focusing and tracking coil members, mounted on a base separate from the movable blade (shown in figure 1), interacting with the magnet of the blade to control the moving of the blade in the focusing and tracking directions (column 9, lines 4-17).

Regarding claim 21, Nagasato et al. teaches the optical pickup method of claim 17, wherein the coil system drives the blade in an additional radial tilting direction (column 9, lines 4-17).

Regarding claim 22, Nagasato et al. teaches the optical pickup method of claim 21, wherein the coil system includes the focusing coil members, tracking coil members, and tilt driving coil members, all mounted on a base separate from the movable blade

(shown in figure 1), interacting with the magnet of the blade to control the moving of the blade in the focusing and tracking directions (column 9, lines 4-17).

Regarding claim 23, Nagasato et al. teaches a recording and/or reproducing method (explained as conventional), comprising: registering an electrical signal representative of data stored ("information signals"), or to be stored, on a recording medium; and performing the optical pickup actuating method of claim 19 to control the recording and/or reproducing of data to/from the recording medium to generate the electrical signal registered as the stored data, when performing the reproducing process, or to stored data on the recording medium based on the electrical signal, when performing the recording process (column 1, lines 19-44).

3. Claims 4, 8, 12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasato et al. in view of Van Rosmalen et al., further in view of Choi, US Patent Publication 2003/0198148.

Nagasato et al. in view of Van Rosmalen et al. teaches the actuator and recording/reproducing device with all of the limitations of claims 3, 5, 11, and 13. Nagasato et al. in view of Van Rosmalen et al. does not teach the explicit need for tilt driving coil members that are installed under the focusing coil member.

Regarding claim 4, Choi teaches in figure 13(c) the optical pickup actuator, wherein the pair of tilt driving coil members (235c and 235d) are installed under the focusing coil member (235a or 235b).

Regarding claim 12, Choi teaches in figure 13(c) the optical recording and/or reproducing apparatus, wherein the pair of tilt driving coil members (235c and 235d) are installed under the focusing coil member (235a or 235b).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of tilt driving members installed under focusing coil members as taught by Choi into the system of Nagasato et al. in view of Van Rosmalen et al. The motivation would be to accurately distribute current to improve the focusing movement force (paragraph 0096 of Choi) while reducing the amount of space taken up by the coils.

Nagasato et al. in view of Van Rosmalen et al. teaches the actuator and recording/reproducing device with all of the limitations of claims 1 and 9. Nagasato et al. in view of Van Rosmalen et al. does not teach the explicit need for fine pattern coils.

Regarding claim 8, Choi teaches the optical pickup actuator, wherein the focusing and tracking coil members are Fine Pattern Coils (FPCs) (paragraph 0055).

Regarding claim 16, Choi teaches the optical recording and/or reproducing apparatus, wherein the focusing and tracking coil members are Fine Pattern Coils (FPCs) (paragraph 0055).

It would have been obvious to one of ordinary skill in the art at the time of the invention to make the first and second coil members of Nagasato et al. in view of Van Rosmalen et al. as Fine Pattern Coils as taught by Choi. This is an art recognized



equivalent that is used in the same environment, for the same purpose, to achieve the same results.

### ***Response to Arguments***

4. Applicant's arguments filed 4/11/08 have been fully considered, but are not persuasive.

Applicant argues that the tracking and focusing coils are not separated in the combination of references. However, figure 7 of Nagasato et al. teaches the coils being separated.

Applicant argues that the combination of references does not teach the coils on the stationary base and the magnet on the movable base. However, column 9, lines 30-43 of Nagasato et al. teaches this concept.

Applicant argues that Van Rosmalen does teach a single magnet member. However, Van Rosmalen clearly states that only element 45 of figure 3 is a magnet. The ferromagnetic members are not specified to be magnets and thus, the system of Van Rosmalen also has only one magnet member. Although the applicant may have meant to recite "a single magnetic member" in the claim, this aspect has not yet been claimed and is thus not considered.

Applicant argues that the combination is unclear and not possible. However, as Nagasato et al. is primarily used for the concept of placement of elements, it would be possible to modify the invention using Van Rosmalen. The number of elements of Van Rosmalen would make sense in the placement taught by Nagasato et al. The efficient use of the magnetic driving forces is the motivation for this combination.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PARUL GUPTA whose telephone number is (571)272-5260. The examiner can normally be reached on Monday through Thursday, from 10 AM to 7 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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